

**PATENT APPLICATION**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q78377

Michiya ODAWARA, et al.

Appln. No.: 10/577,475

Group Art Unit: Not Yet Assigned

Confirmation No.: 6672

Examiner: Not Yet Assigned

Filed: April 27, 2006

For: COMPOUND SEMICONDUCTOR LIGHT-EMITTING DEVICE HAVING  
PN-JUNCTION TYPE HETERO STRUCTURE AND FORMING METHOD THEREOF

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.97 and 1.98**

**MAIL STOP AMENDMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith, except for the following: U.S. patents and/or U.S. patent publications; and co-pending non-provisional U.S. applications filed after June 30, 2003.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after

INFORMATION DISCLOSURE STATEMENT  
U.S. Appln. No.: 10/577,475

filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

Additionally, in compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicants submit Abstracts and machine translations for JP 6-268259, JP 5-183189 and JP 6-260682. Additionally, Applicants submit translations for the Akasaki; Teramoto and Saitoh articles.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: October 12, 2006

Substitute for Form 1449 A & B/PTO  <b><u>INFORMATION DISCLOSURE</u></b> <b><u>STATEMENT BY APPLICANT</u></b>  <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	10/577,475
				Confirmation Number	6672
				Filing Date	April 27, 2006
				First Named Inventor	Michiya ODAWARA
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet <u>1</u> of <u>1</u>				Attorney Docket Number	Q78377

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
		US			
		US			
		US			
		US			
		US			
		US			
		US			
		US			

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		JP	5-183189		07-23-1993	NICHIA CHEM IND LTD	Yes
		JP	6-260682		09-16-1994	NICHIA CHEM IND LTD	Yes
		JP	6-268259		09-22-1994	NICHIA CHEM IND LTD	Yes

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		Isamu AKASAKI; "Group III-V compound semiconductor"; Advanced Electronics Series; Vol. I-1; May 20, 1994; pp. 329-352	Yes
		Iwao TERAMOTO; "Introduction of Semiconductor Device"; March 30, 1995; pp. 1-3	Yes
		T. UDAGAWA, et al.; "Lattice-Matched Boronphosphide (BP)/Hexagonal GaN Heterostructure for Inhibition of Dislocation Penetration"; Technical Digest; 5 <sup>th</sup> International Conference on Nitride Semiconductors; May 25-30, 2003; Nara, Japan	
		Y. KUMASIRO, et al.; "Preparation and Electrical Properties of Boron and Boron Phosphide Films Obtained by Gas Source Molecular Beam Deposition"; Journal of Solid State Chemistry; 1997; Vol. 133; pp. 269-272	
		Y. SAITOH; "Crystal Growth"; Physics Library of Shokabo; November 20, 2002	Yes

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.